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ABSTRACT

This paper reports on a study that investigated whether or not protective factors within children that contributed to resilience were strengthened in young children participating in the Devereux Early Childhood Assessment (DECA) Program, a preschool primary prevention program designed to foster social and emotional well-being. The DECA assessment was given to 133 preschool children who received the full program and to 209 children who received treatment-as-usual. All children were assessed by their teacher and a parent with the DECA in the fall of 2000 and spring of 2001. For the target group, protective factors increased significantly over the course of the year and compared with the control group. Behavioral concerns increased significantly for the control group with a decrease in behavioral concerns for the target group as evaluated by teachers (but not parents). Findings provided evidence for the effectiveness of the DECA Program in both increasing children's protective factors and deceasing their behavioral concerns. (DB)

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Can We Foster Resilience? An Evaluation of a Prevention Program for Preschoolers

Paul A. LeBuffe

Introduction

Increasing attention is being paid to the social and emotional development of young children as evidenced by the recent "Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda" (U.S. Public Health Service, 2000), and the publication, "From Neurons to Neighborhoods: The Science of Early Childhood Development" (Shonkoff & Phillips, 2000). A core concept in children's mental health discussed in both of these reports is resilience, the ability of children to attain normal or better than normal developmental outcomes despite being exposed to risk. A critical question in the resilience literature concerns the extent to which resilience can be fostered in young children.

This study investigates whether or not within-child protective factors, which are a contributing factor to resilience, can be strengthened in young children. This study also serves as an initial evaluation of the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999) Program, a preschool primary prevention program designed to foster social and emotional well-being.

Based on resilience theory, the DECA Program is a comprehensive, strength-based, primary prevention program designed to foster social and emotional well-being in all preschool children ages two through five. The DECA Program focuses on the development of within-child protective factors, including personality characteristics and behavioral traits of the child that moderate or buffer the negative effects of stress and adversity. The DECA Program operates within a naturalistic and ecological framework. The within-child protective factors are strengthened by enhancing both the quality of childcare programs and the skills of parents. The DECA Program utilizes developmentally appropriate practices and focuses on five program areas: the environment, the daily program, activities and experiences, supportive interactions with children, and partnerships with families. The curriculum includes strategies at both the classroom (universal) and the individual child (targeted) level. Individual child strategies are implemented by both the early care and education professional and the parent(s).

Method

A quasi-experimental, pretest-posttest control group design was used. Target sites included 133 children. The treatment-as-usual control group consisted of 209 children. Sites in both groups were Head Start programs. Different program sites were used for the target and the control conditions to avoid unintentional dissemination of the DECA Program to the control-condition teachers.

The primary dependent measure was the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999), a recently published, nationally normed behavior rating scale assessing within-child protective factors. The DECA provides four protective factor scales: Initiative, Self-Control, Attachment and Total Protective Factors as well as a Behavioral Concerns Screener.

All children in both groups were assessed by both their teacher and a parent with the DECA in the fall of 2000 and spring of 2001. Children in the target group participated in the DECA program between the two administrations whereas children in the control group did not. In the target group, DECA results were used to guide the selection of universal and targeted strategies designed to strengthen the within-child protective factors.

Results

In this study, all results are reported in T-scores, which have a mean of 50 and a standard deviation of 10. Due to space limitations, these results will focus only on the Total Protective Factor Scale and

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the Behavioral Concerns Scale. Because the Total Protective Factor Scale assesses children's strengths, high scores are desirable. In contrast, high scores on the Behavioral Concerns Scale indicate considerable behavioral difficulties and, therefore, low scores are desirable.

Baseline Data

The DECA scores provided by both parent and teacher raters for both target and control children at baseline (pretest) were analyzed for similarities and differences between all children. The means for parent raters were 47 and 48 for the target and control groups respectively. For teacher raters, the means for both conditions were 49. These values are very close to the national mean of 50, and indicate that the children participating in this study did not differ markedly from most preschool children. There were no significant differences on the Total Protective Factor scores between the target and control groups at baseline.

For the Behavioral Concerns Scale, teacher ratings for the target ($x = 47$) and control ($x = 46$) did not differ. However, the mean score for parent ratings of the target group ($x = 60$) was significantly higher than the mean parent rating of the control group ($x = 56$) $t = 2.38$, $df = 300$, $p < .05$.

Posttest Data

In order to analyze the changes between pre- and posttests, only children who had a complete set of Time 1 and Time 2 DECA ratings completed by either a parent or teacher were included in the sample. The final sample size was 113 target and 182 control children rated by teachers, and 82 target and 171 control children rated by parents. Paired sample *t*-tests and repeated measures ANOVAs were used to analyze the results. The results are presented in Tables 1 and 2.

Protective Factor Results. Table 1 presents the results for Total Protective Factors as rated by teachers and parents. For teacher raters, children in both the target and the control groups showed significant increases in their Total Protective Factor scale scores. However, children in the target group showed greater increases than children in the control group as indicated by a significant interaction effect ($F = 8.15$ $df = 1,293$, $p < .005$). For parent raters, however, only the target group showed an increase in Total Protective Factor scale scores ($t = -2.43$, $df = 81$, $p < .05$). Although there were significant increases in Total Protective Factors for target condition children as rated by both parents and teachers, the magnitude of these increases (i.e., effect size) was small for parents ($d = .22$) and moderate for teachers ($d = .66$).

Behavioral Concerns Results. Table 2 presents the results for the Behavioral Concerns Scale as rated by teachers and parents. The teacher ratings of Behavioral Concerns show a significant decrease for the target group ($t = 2.84$, $df = 112$, $p < .005$) and a significant *increase* for the control group ($t = 3.39$, $df = 181$, $p < .001$). The ANOVA revealed a significant interaction effect ($F = 18.23$, $df = 1,293$, $p < .000$).

Table 1
Total Protective Factor Scale T-Scores

	Pretest		*Posttest*	
	X	*(SD)*	*X*	*(SD)*
Teachers				
Target	49	(7.6)	54	(6.8)
Control	49	(10.7)	52	(11.5)
Parents				
Target	47	(11.5)	49	(10.6)
Control	48	(10.9)	48	(12.1)

Table 2
Behavioral Concerns Scale T-Scores

	Pretest		*Posttest*	
	X	*(SD)*	*X*	*(SD)*
Teachers				
Target	47	(8.2)	45	(9.2)
Control	46	(8.7)	48	(10.8)
Parents				
Target	60	(13.8)	59	(12.0)
Control	56	(11.1)	60	(13.2)

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The effect sizes for both groups were small (d = .22 and .20 for target and control groups respectively). For parent raters, there was no significant decrease for the target group. However, there was a significant *increase* in behavioral concerns for the control group (t = -3.52, df = 170, p < .001). Again, the ANOVA revealed a significant interaction effect (F = 8.08, df = 1, 251, p < .005). This effect size for this increase was also small (d = .29)

Discussion

This study provides consistent evidence for the effectiveness of the DECA Program in both increasing children's protective factors and decreasing their behavioral concerns. For the target group, as rated by both parents and teachers, protective factors increased significantly over the course of the year. Although parents did not report an increase in Protective Factors for the children in the control group, teachers did. This finding might be due to pretest sensitization or "compensatory control group effects"—the tendency of control group teachers to second-guess and self-administer the intervention so as not to look "bad" in comparison to the target group (Kazdin, 1998).

For both parent and teacher raters, behavioral concerns increased significantly for the control group. A decrease in behavioral concerns in the target group was reported only by the teachers.

Although the results were consistent with the experimental hypotheses, and statistically significant, the effect sizes reported in this study tended to be small to moderate (ranging from .20 to .66 of a standard deviation). However this is not surprising, in that this program was implemented under naturalistic conditions. That is, teachers in the target group were trained, but were not closely supervised in their implementation of the DECA program. Therefore, these results are probably representative of what a typical program, without benefit of extensive training, supervision or consultation, could expect.

Most importantly, these data indicate that children's protective factors can be increased through a teacher-implemented, classroom-based program. The long-term effects of these changes on children's success in school and life in general are being investigated in ongoing longitudinal studies.

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